

007E50 87023500

FIG. 1A

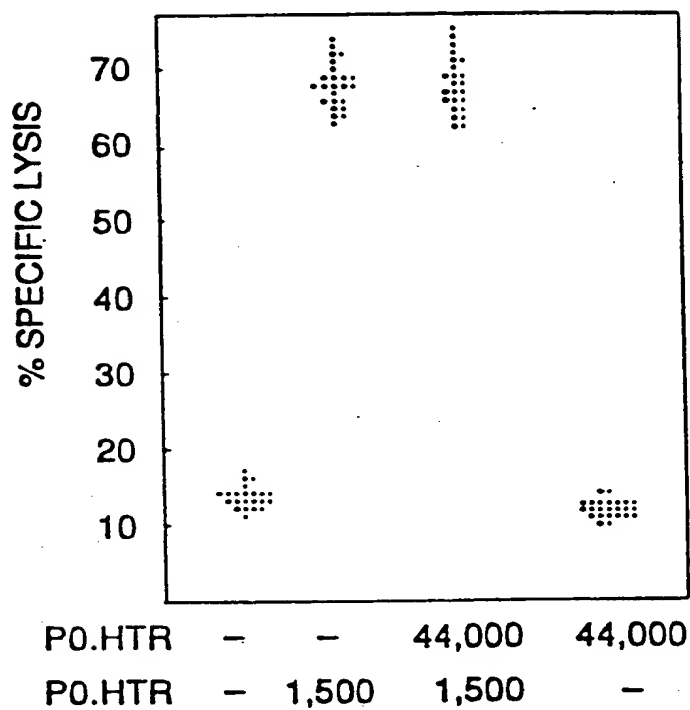


FIG. 1B

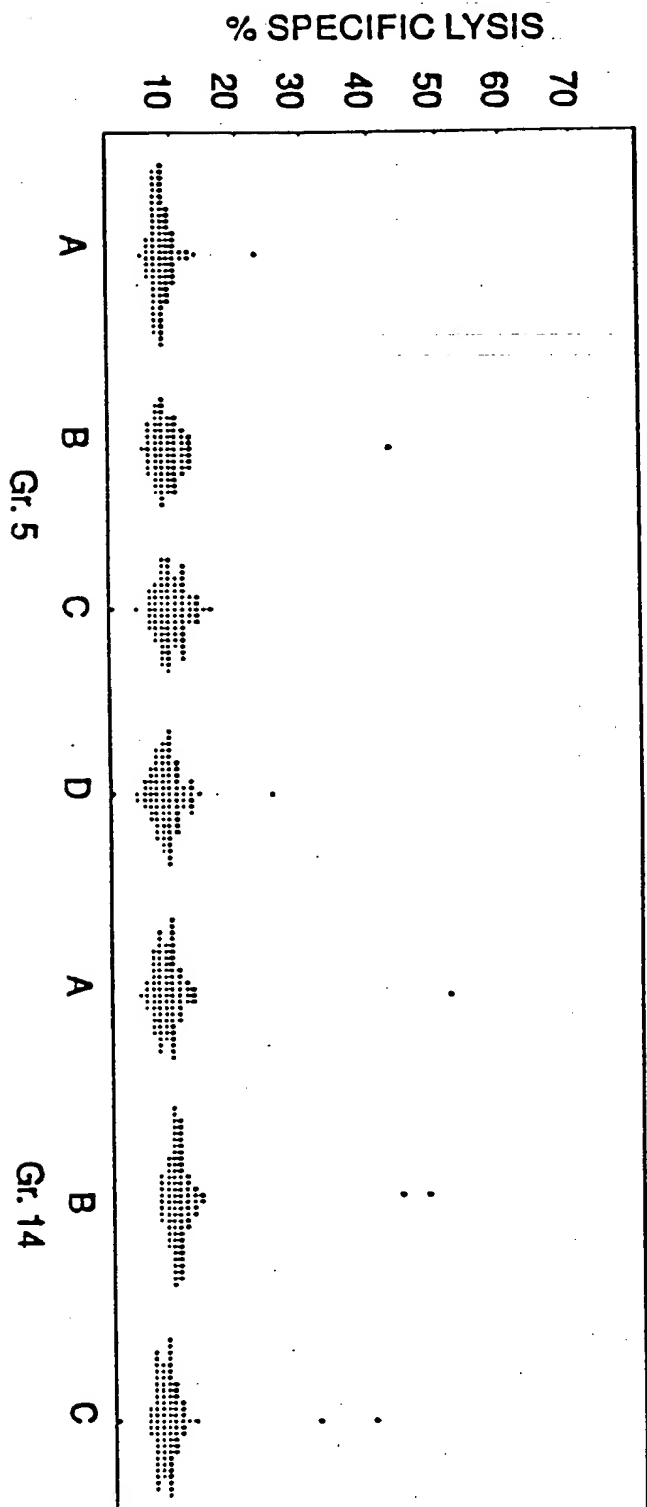


FIG. 2

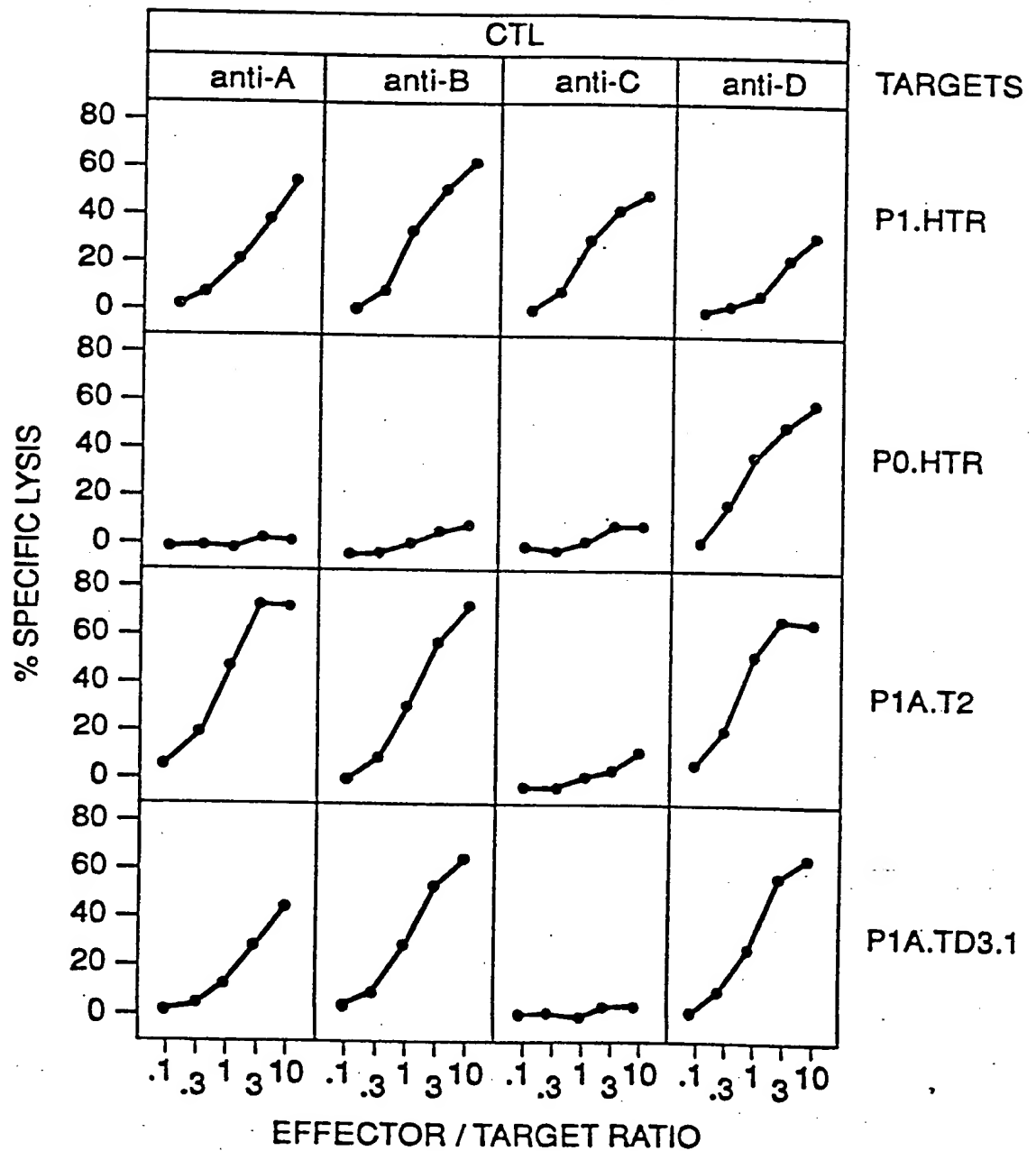
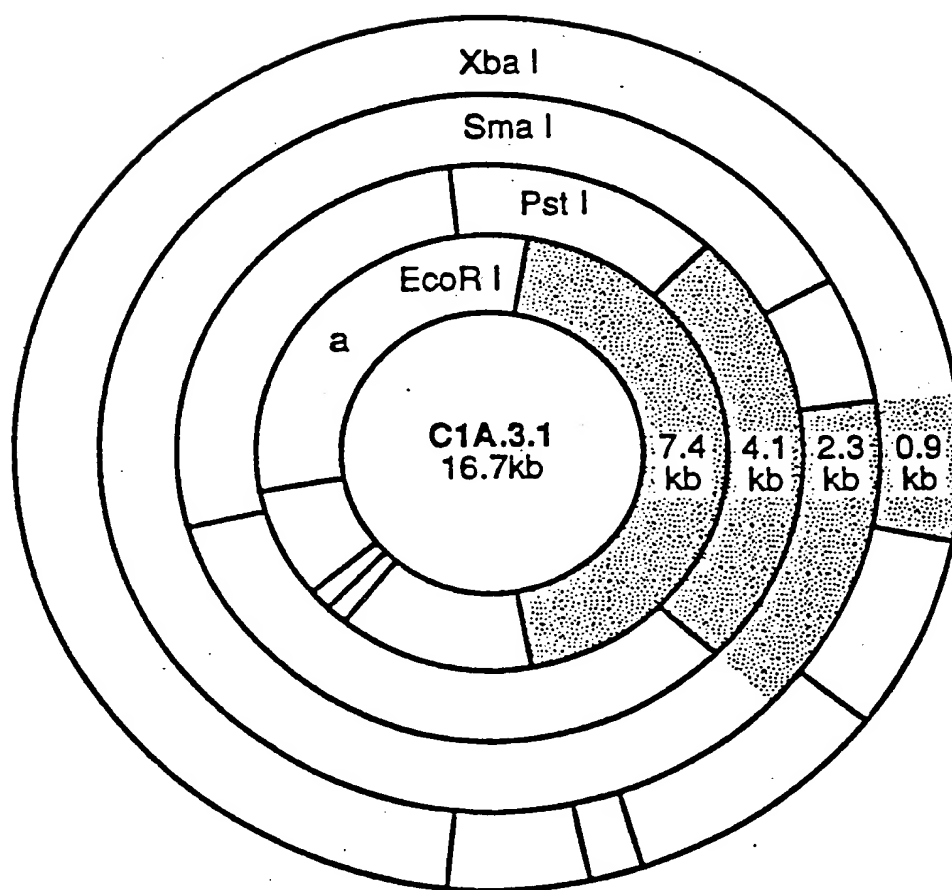


FIG. 3



007650" 01060550

FIG. 4

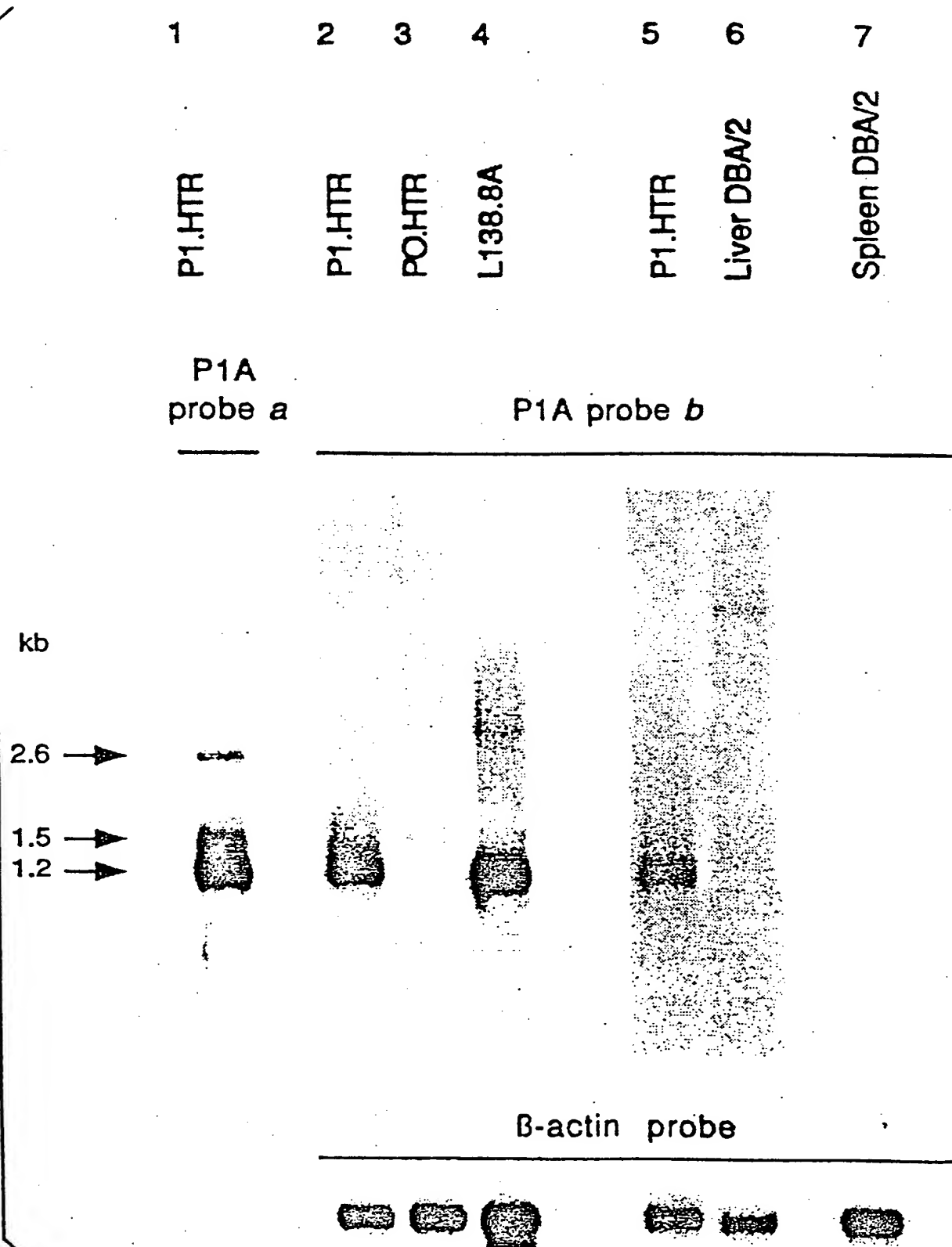


FIG. 5

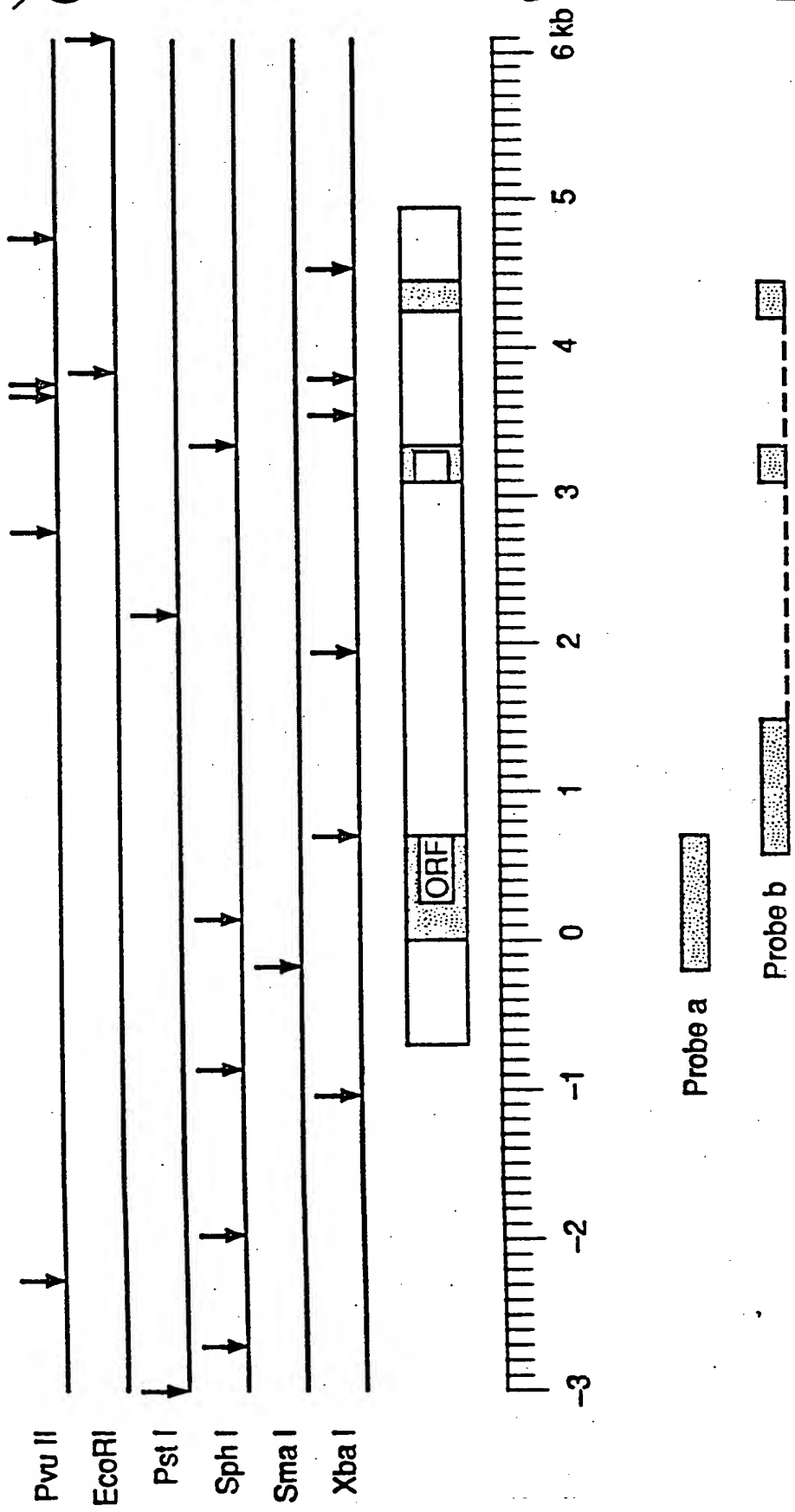


FIG. 6

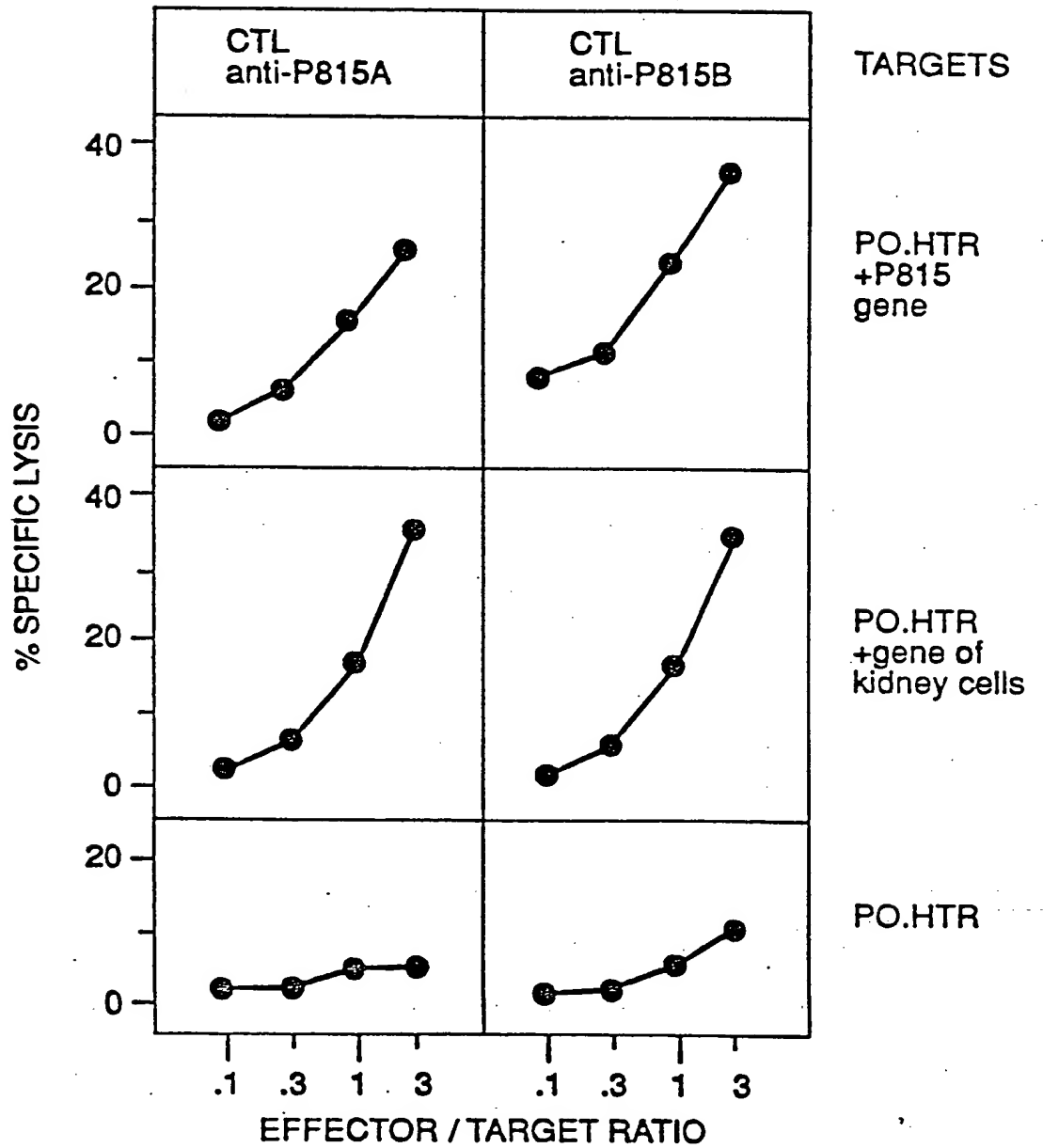


FIG. 7

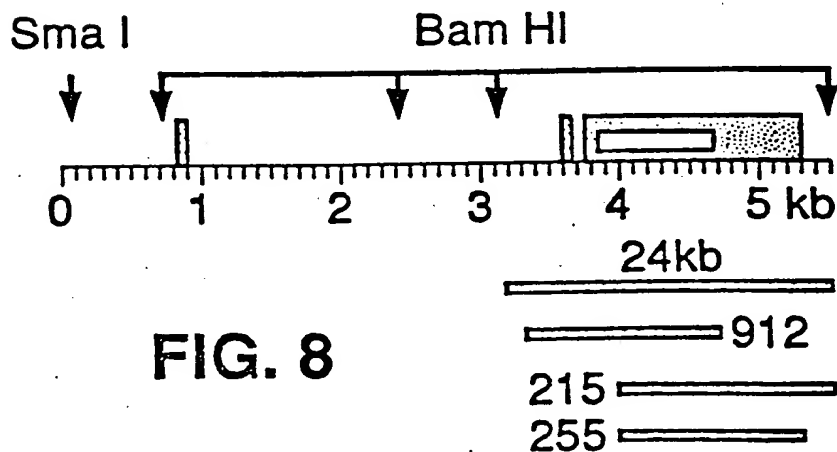
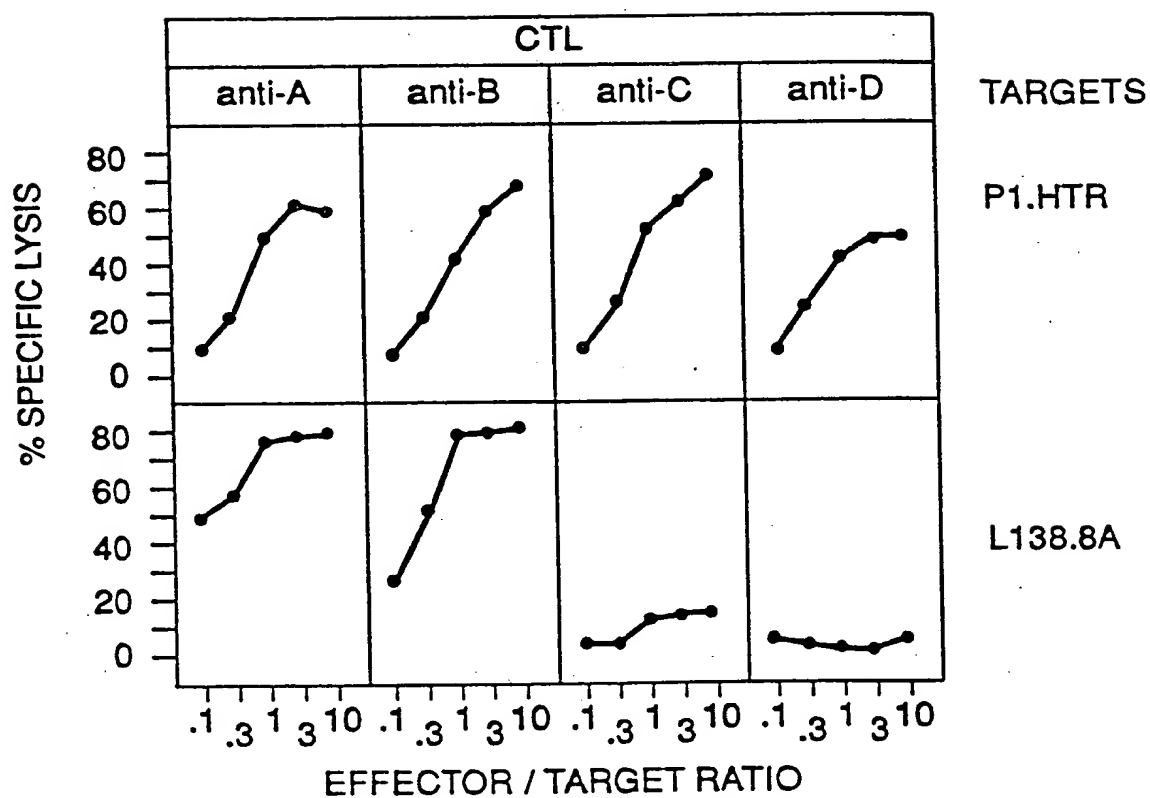


FIG. 8

FIG. 9

MAGE-3 III CCTCCCCAGAGTCCTCAGGGAGCCTCCagCCtCCCCACTACCATgAACTaCCTCtctgGAGcCAAtCCTaTGAGGacTCCAGCAaCCaaGAAGAGGAGG
 MAGE-2 II CCTCCCCACAGTCCTCAGGGAGCCTCCagCTTctGACTACCATCAACTaCACTCtcttgGAGaCAAtCCgaTGAGGgcTCCAGCAaCCaaGAAGAGGAGG
 MAGE-1 I CCTCCCCAGAGTCCTCAGGGAGCCTCCGCCtTtCCCACTACCAtCAACTtCACTCGACAGAGGCAACCCAGtGAGGgtTtCCAGcAGCCGTGAAGAGGAGG
 225 CHO-8
 III GGCCCAAGCACCTtCCCTgaCC-TGGAGTCCgaGTTCaAGCAGcAcTCagTAgGAAGGTGGCCgAGtTGGTtCaTtTtTCTGCTCCTCAAgTATCGAGGCCA
 II GGCCCAAGaAtgtTtCCcgacCtTGGAGTCCGAGTtCCaAGCAGCAATCAGTAgGAAGaTGGtTGAGtTGGTtCaTtTtTCTGCTCCTCAAgTATCGAGGCCA
 I GGCCCAAGcACCTtCTtGTATCC-TGGAGtCCtTtGTtCCGAAGCAgTAATCACTAAGAGGTGGCTGATtTGGTtGGTtTtTCTGCTCCTCAAAATATCGAGGCCA
 325
 III GGGAGCCgGTCAaAAGGCAGAAATGCTGGgGAGTGTGtGtGgAAATtggcAGtAtTtctTTCTGTGtGATCTtCaGCAAAAGCtTccagTtCCtTtGCAGCT
 II GGGAGCCgGTCAaAAGGCAGAAATGCTGGAGAGTGTGtTCaGAAATtggcAGgACTtctTTtCCCGtGATCTtCaGCAAAAGCCTtCCGAGtActTtGCAGCT
 I GGGAGCCAGtCAaAAGGCAGAAATGCTGGAGAGTGTGtCAaAAATtAaAGCAcIGtTtTCTGAGATCTtGGCAAGCCtCTGAGtCTtGCAGCT
 425 SEO-4
 III GGtCTtTGGCAtCGAgCTGaTGGAAgTgGACCCCAcCGGCCACTtGTAcATCtTtGcCACCTGcCTgGGcCTCTCTACgATGGCCtGCTGGGTGACAAAT
 II GGtCTtTGGCAtCGAgCTGgTGGAAgTgGtCCCCAtcAGCCACTtGTAcATCCTtGTACCTtGCCtGGcCTtGCTACgATGGCCtGCTGGGcGACAAAT
 I GGtCTtTGGCAtTGAGtGAAGGAAGcAGACCCCAcCGGCCACTtCCtATGTCTtGTcACCTtGCCtTAGGtCTtCTtATGATGGCCtGCTGGGTGATTAAT
 525
 III CAgATCATGCCCAAGgCAGGCCtCTCTGATAATGtTCTTGCCcATaATCGCAAgagAGGGCGGacTgTGCCcCTGAGGAGaAAATCTGGGAGGAGCTGAGTG
 II CAGgTCATGCCCAAGACAGGCCtCTCTGATAATcGTc-TGGcCATaATCGCAATaGAGGGCGacTgTGCCcCTGAGGAGaAAATCTGGGAGGAGCTGAGTa
 I CAGATCATGCCCAAGACAGGCCtTCTCTGATAATtGTCTCTTGTCATGATtGCAATGGAGGGCGGcCATGCTCTGAGGAGGAAATCTGGGAGGAGCTGAGTG
 625 CHO-9

β-action

MAGE

PROBES

FIG. 10



MZ2-MEL3.0
MZ2-MEL 1982
MZ2-MEL.2.2 E-
MZ2-PBL-PHA
Lung
Kidney



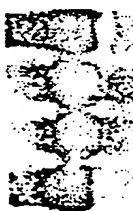
MZ2-MEL 3.0
MZ2-CTL 82/30
LB34-MEL
LB17-MEL
MI665/2-MEL
LB41-MEL
MI10221-MEL
MI13443-MEL
SK23-MEL
SK33-MEL

Other
melanomas



LB4-MEL
MI4024-MEL
MZ3-MEL
MZ5-MEL
SK29-MEL
LB31-COL
LS411-COL

Other
tumors



H209-SCLC
H345-SCLC
H510-SCLC
TT

FIG. 11

Expression of
antigen MZ2-E
after transfection**

		EXPRESSION OF MAGE GENE FAMILY				RECOGNITION BY AN/E CTL		
		Northern blot probed with cross-reactive MAGE-1 probe*	cDNA-PCR product probed with oligonucleotide specific for:		TNF release†	tested by:		
			MAGE-1	MAGE-2		MAGE-3‡	Lysis§	
Cells of patient MZ2	melanoma cell line MZ2-MEL3.0	+	+++	++++	++++	+	+	
	tumor sample MZ2 (1982)	+	+++	+++	+++			
	antigen-loss variant MZ2-MEL2.2	+	-	+++	+++	-	-	
	CTL clone MZ2-CTL82/30	-	-	-	-			
	PHA-activated blood lymphocytes	-	-	-	-			
Normal tissues	Liver	-	-	-	-			
	Muscle	-	-	-	-			
	Skin	-	-	-	-			
	Lung	-	-	-	-			
	Brain	-	-	-	-			
	Kidney	-	-	-	-			
Melanoma cell lines of HLA-A1 patients	LB34-MEL	+	++	++++	++++	+	+-	
	M565/2-MEL	-	-	-	-	-	-	+
	M110221-MEL	+	-	++	+++	-	-	+
	M113443-MEL	+	+++	++++	++++	+	+	
	SK33-MEL	+	-	++++	++++	-	-	-
	SK23-MEL	+	-	++++	++++	-	-	+
Melanoma cell lines of other patients	LB17-MEL	+	+	++++	++++	-	-	-
	LB33-MEL	+	-	+++	+++	-	-	-
	LB4-MEL	-	-	-	-	-	-	
	LB41-MEL	-	-	-	-	-	-	
	M14024-MEL	+	+++	++++	++++	-	-	
	SK29-MEL	-	-	-	-	-	-	
	MZ3-MEL	+	+	++++	++++	-	-	
	MZ5-MEL	+	-	++++	++++	-	-	
Melanoma tumor sample	B85-MEL	+	+++	++	+++			
Other tumor cell lines	small cell lung cancer H209	+	-	++++	++++			
	small cell lung cancer H345	+	-	++++	++++			
	small cell lung cancer H510	+	-	++++	++++			
	small cell lung cancer LB11	+	+	++++	++++			
	bronchial squamous cell carcinoma LB37	+	-	-	++			
	thyroid medullary carcinoma TT	+	++++	+++	++++			
	colon carcinoma LB31	+	-	+++	++++	-		
	colon carcinoma LS411	-	-	-	-			
Other tumor samples	chronic myeloid leukemia LLC5	-	-	-	-			
	acute myeloid leukemia TA	-	-	-	-			

* Data obtained in the conditions of figure 5.

† Data obtained as described in figure 6.

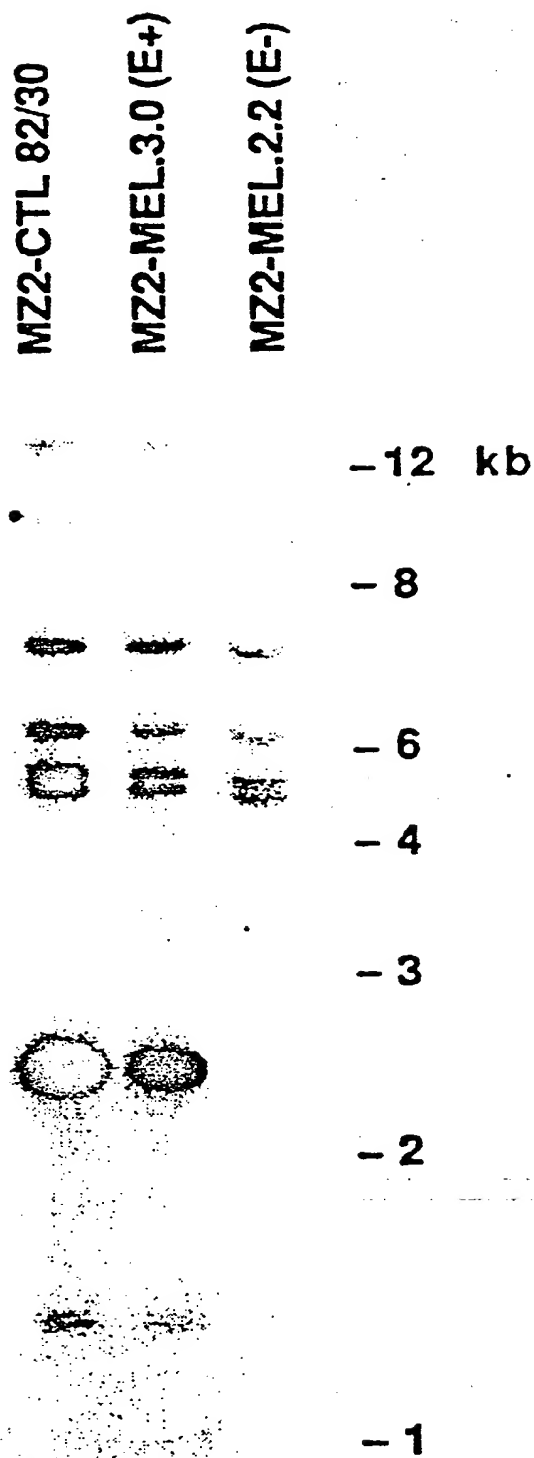
‡ TNF release by CTL 82/30 after stimulation with the tumor cells as described in (11).

§ Lysis of 51 Cr labeled target by CTL 82/30 in the conditions of figure 1.

** Cells transfected with the 2.4 kb fragment of gene MAGE-1 were tested for their ability to stimulate TNF release by CTL 82/30

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FIG. 12



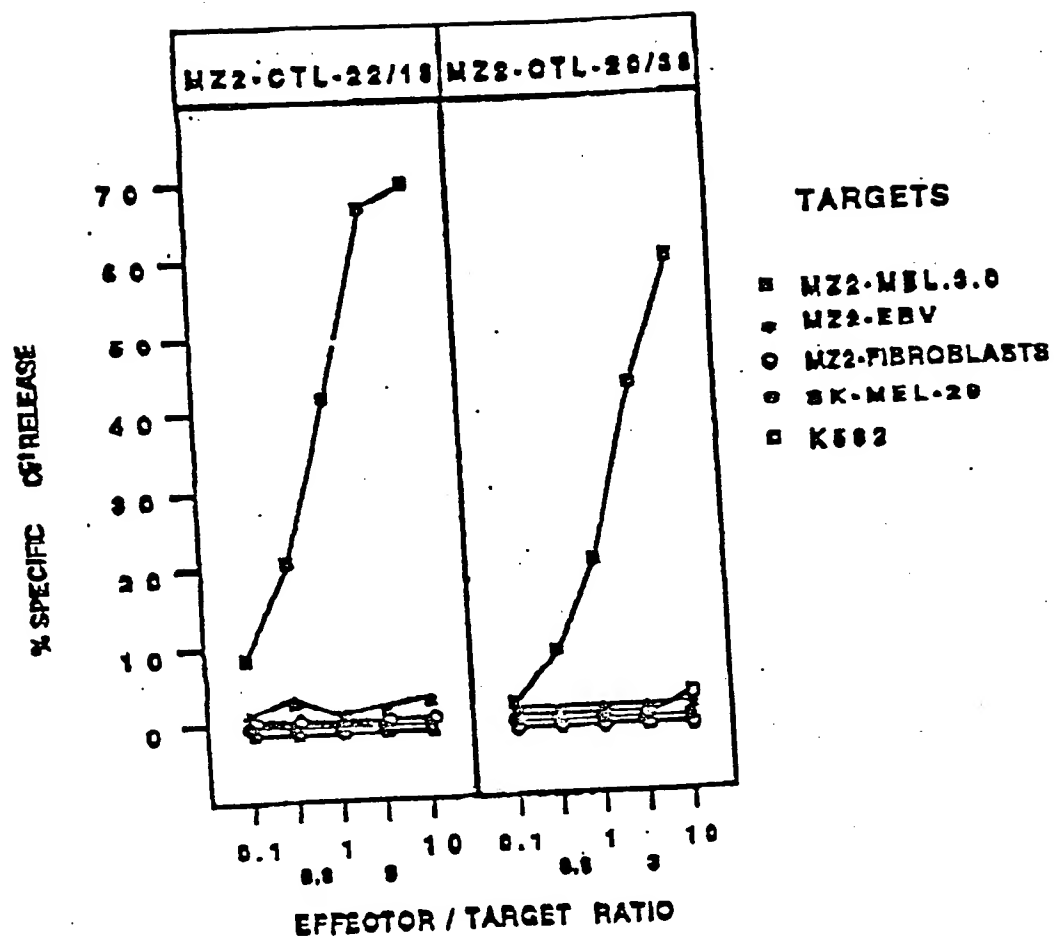


Fig. 14

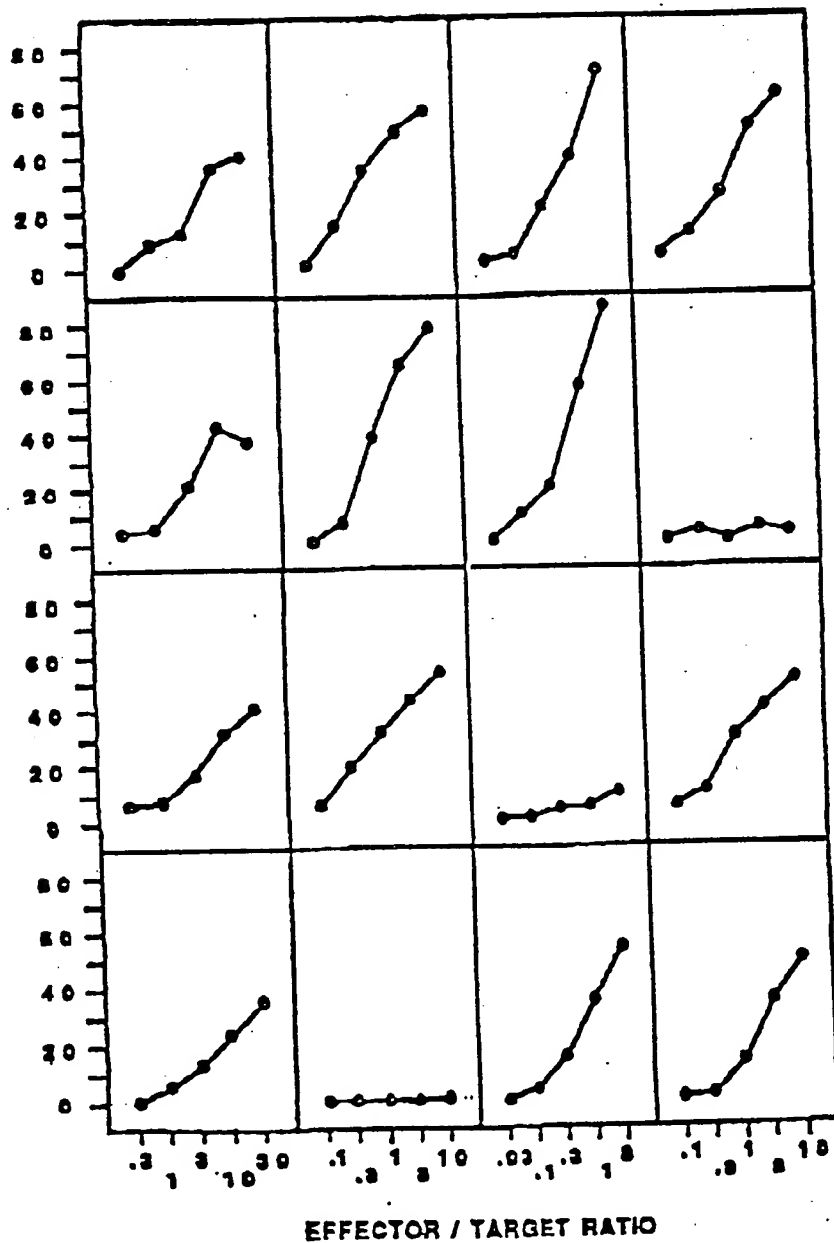
CTL anti-A⁺
(26/336)

CTL anti-F
(76/6)

CTL anti-E
(22/13)

CTL anti-D⁺
(20/38)

% SPECIFIC CYTOTOXICITY



TARGETS

MZ2-MEL.8.0
A⁺ (D⁺ E⁺ F⁺ A⁺)

MZ2-MEL.61
D⁻

MZ2-MEL.2.2
E⁺

MZ2-MEL.4
F⁻

Fig. 15

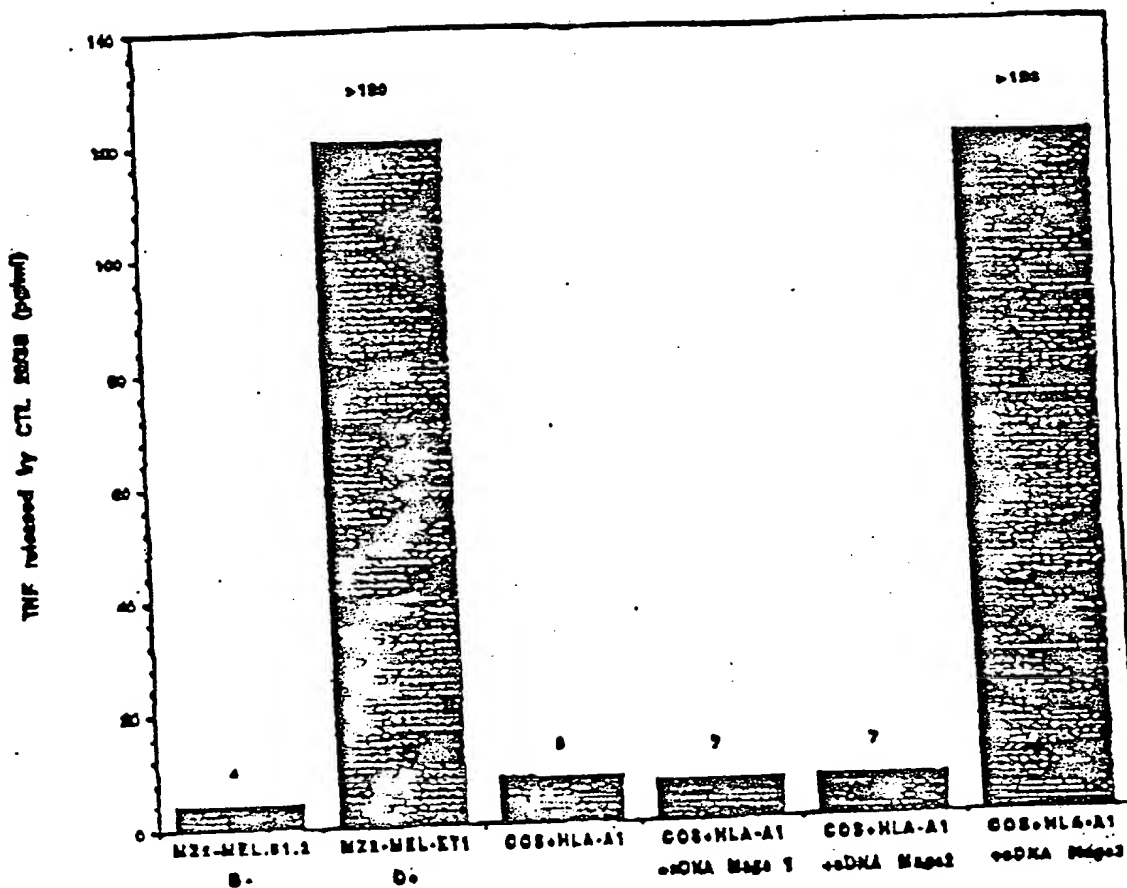


Fig. 16